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**(54) EXHAUST EMISSION CONTROL SYSTEM FOR  
INTERNAL COMBUSTION ENGINE**

**(57) Abstract:**

**PROBLEM TO BE SOLVED:** To supply an optimal quantity of the reducing agent in response to the NOx occlusion quantity by estimating the NOx occlusion quantity on the basis of the output of a gas concentration sensor installed in the downstream side of the lean NOx occlusion catalyst, and controlling the rich time of the air-fuel ratio on the basis of the estimated value.

**SOLUTION:** An exhaust emission control system is provided with a NOx occlusion catalyst 7 provided in an exhaust pipeline of an internal combustion engine, an exhaust gas temperature sensor 9 provided in the exhaust pipe in the upstream side of the NOx occlusion catalyst 7 and for outputting the signal corresponding to the air-fuel ratio of the exhaust gas, a  $\lambda$ O<sub>2</sub> sensor 10 provided in the exhaust pipe in the downstream side of the NOx occlusion catalyst 7 and for outputting the signal corresponding to the oxygen concentration included in the exhaust gas, a NOx occlusion quantity estimating means 17 for estimating the NOx occlusion quantity of the NOx occlusion catalyst on the basis of the output signal of the sensor 9 or

the sensor 10, and a fuel control means 17 for controlling the NOx occlusion and controlling for reduction of the NOx occlusion catalyst in the rich condition or the lean condition of the air-fuel ratio and for controlling the occlusion and reduction of the lean NOx occlusion catalyst on the basis of the NOx occlusion quantity estimated by the NOx occlusion quantity estimating means 17.

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